

STATINTL

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*Army and DoD reviews
completed*☐ UNCLASSIFIED☐ INTERNAL
USE ONLY☐ CONFIDENTIAL☐ SECRET

ROUTING AND RECORD SHEET

SUBJECT: (Optional)

On Tourist Reservation System

FROM:

EXTENSION

NO.

DATE

18 32/75
7/21/75

STATINTL

TO: (Officer designation, room number, and building)

DATE

OFFICER'S
INITIALS

COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment)

	TO:	DATE		OFFICER'S INITIALS
		RECEIVED	FORWARDED	
1.	EO		21 July	GD
2.	DD		22 July	ARM
3.	D		7/28	X
4.	SO		8/25	el
5.	C/PS		9/21	AP
6.	C/USD			K
7.	FO		3 Sept	GD
8.	for DoD			
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TRANSMIT TO: SLIP		DATE
TO: OJCS		
ROOM NO.	BUILDING	
REMARKS:		
FROM:		
ROOM NO.	BUILDING	EXTENSION

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INTERNATIONAL SECURITY AFFAIRS

DD/A 75-252
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ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

Executive Registry

75-7324

75-4925

2 JUL 1975

In reply refer to:
I-6803/75ct

OJCS # 183275

Honorable Rogers C.B. Morton
Secretary of Commerce
Department of Commerce
Washington, D. C. 20230

Dear Mr. Morton:

(C) In accordance with the agreement reached by the Export Administration Review Board at its meeting in your office on October 29, 1974, we are sending you the enclosed report on safeguards for the IBM computer installation proposed for the INTOURIST reservation system. The report was prepared by an interagency task force convened by the Department of Defense. Its members were drawn from State, Defense, Commerce, AEC and NASA.

(C) This is by far the most difficult and, in our judgment, the most significant of the three large computer cases the Board has been called on to consider, and we must tell you that we have serious doubts as to whether the U.S. Government should approve it. Our concerns arise primarily because this system is more susceptible of diversion than either the KAMA RIVER or AEROFLOT installations, its use by the KGB to enhance their surveillance operations substantially is both likely and unpreventable and, by supplying an undeniable precedent for the release to the Soviet Union of very large, data-base oriented computers, approval by the U.S. will undercut our efforts to maintain an effective system of computer export controls.

(U) To facilitate evaluation of the report by the Export Administration Review Board, we have taken the liberty of forwarding a copy of this letter and its enclosure to the other members of the Board. We have also sent copies to the principals of the other agencies represented on the task force.

(U) We would be interested in hearing your views.

Sincerely,

Robert G. Ellsworth

Enclosure

CLASSIFIED BY: DIR, ST&D

EXEMPT FROM GDS OF EO 11652

EXEMPTION CATEGORY 2

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International Security Affairs



INTERNATIONAL SECURITY AFFAIRS

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OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

1 JUL 1975
In reply refer to:
I-6803/75ct

MEMORANDUM FOR The Deputy Secretary of Defense

SUBJECT: INTOURIST Reservation System

(C) On October 29, 1974, the Export Administration Review Board asked the Department of Defense to convene an interagency task force to study the feasibility of safeguards to be applied in the interest of U.S. national security to certain large computer systems proposed for export to the Soviet Union. This is the report of the task force on the third and last of these cases, the IBM proposal to computerize the INTOURIST reservation system.

CONCLUSIONS

1. (C) This is the largest U.S., and in some respects the largest Western, computer system so far proposed for installation in the Communist world.
2. (C) Because of its size and the nature of the tasks it will perform, it has substantial amounts of excess computing power available for diversion to significant military uses.
3. (C) The dual configuration of this installation, its ability to be separated into two viable systems, the interchangeability of its central processing units (CPU's), and the very large number of peripheral memory devices it contains, combine to provide numerous means by which substantial proportions of the system's total capacity can be surreptitiously diverted to other than its stated purposes.
4. (C) Beyond the possibility of diversion to military purposes, it is highly likely that some of this system will be used to enhance KGB surveillance and control activities.

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EXEMPT FROM GDS OF EO 11652
EXEMPTION CATEGORY 3
DECLASSIFY ON: Dec 31, 1980

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5. (C) There are no feasible modifications of the CPU's which will safeguard against their use for other than their stated purposes.
6. (C) A substantial reduction in the number of type-3330 disk drives can be made without impairing the operation of the system, at least in the initial phases, and will provide a measure of protection against their diversion.
7. (C) Restricting the number of Soviet personnel trained and the kind and amount of training provided in hardware maintenance, as well as in systems and software design and development, to the minimum necessary and appropriate to the installation will limit undesirable technology transfers.
8. (U) The safeguards outlined in Appendices I and II of this report can be reasonably effective in deterring and detecting significant time diversion of this system to military purposes and in limiting undesirable technology transfers.
9. (C) There are no safeguards which can be installed against diversion of the system to KGB or police-type uses in parallel with bona fide INTOURIST functions.
10. (U) Computer installations approved on the basis of reliance on safeguards need to be held to the minimum possible in both number and size.

RECOMMENDATIONS

(U) The task force makes no recommendation on whether this case should be approved or disapproved on the ground that this is a policy matter outside its competence.

(C) What it does say is that if, after considering the risks involved, a decision is made to approve this transaction, the following measures to reduce as far as possible the diversion of this system are recommended:

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1. The system will be limited to one 370/145 and one 370/158 central processor, 24 type 3330 disk drives and appropriate peripheral equipment, without prejudice to the replacement of the 370/145 with a second 370/158 and the addition of more disk drives when a need for them can be demonstrated.

2. The requirements outlined in Appendices I and II of this report be included as conditions of any license for this installation.

The INTOURIST Organization

(C) INTOURIST is the Soviet Union's state operated travel agency which controls all hotel, restaurant, theater, shop, train and air bookings for non-Soviet citizens inside the USSR and for Soviet citizens outside of the USSR. It also provides some services for Soviet citizens inside the USSR. In 1974 INTOURIST supplied services to 3,447,000 foreigners and 1,650,000 Soviet citizens traveling inside the USSR and to 2,225,000 Soviet citizens traveling outside the USSR.

(C) Given the nature of the Soviet state, with its emphasis on close control of its own citizens, wherever they are, as well as foreigners within its borders, even the most routine aspects of travel require official approval. The result is an extraordinary degree of inflexibility in travel arrangements. Once a particular hotel reservation has been made or an itinerary approved, it is very difficult to change. To alter travel plans on short notice is well nigh impossible. Since contingencies requiring changes are constantly arising, the Soviet traveller, foreigner and citizen alike, regularly experiences confusion, inefficiencies, uncertainties and delays. The Soviet Government recognizes that much of the friction could be reduced, without sacrificing -- indeed with a possible improvement in -- official control of the movement of people, if they had information on the traveller, his itinerary, and requirements for various services on an up-to-the-minute basis and could match that information against an equally up-to-the-minute inventory of available accommodations. It is primarily this function which the IBM computer system is intended to serve.

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(C) The Soviets have specified that the system is to be designed to process a 1978 peak of 11 million travellers -- both foreign and Soviet -- to deal with 1000 foreign and commercial travel agencies, and to keep track of and assign tourists to 500 hotels in 250 cities, 500 trains, 35 ships, rent-a-cars in 200 cities, INTOURIST cars in 250 cities, 280 theaters in 200 cities and 300 restaurants in 250 cities.

Description of Equipment

(C) The computer system which IBM proposes to supply is based upon the airline reservation system that IBM has marketed rather successfully for a number of years. However, it is larger than most such systems and contains a larger variety of functions in keeping with the greater variety of tasks which the INTOURIST agency performs.

(C) The proposal calls for the linking together of two IBM 370 central processing units (CPU's), one to process on-line interactive requests for information and for the updating of information files, and the other to perform ancillary jobs on a batch basis while it simultaneously serves as back up for the on-line real-time computer system. Connected to these CPU's would be appropriate peripherals including 48 type-3330 disk drives.

(C) Delivery would be made in phases. Initially, as soon as the license is granted, an IBM 370/145 computer with a small number of appropriate peripherals, including 8 type 3330 disk drives, is to be delivered for instructional and program development purposes. After about a year, an IBM 370/158 computer with the remainder of the peripherals, including 40 additional 3330 drives, would be delivered. At this point, the proposal calls for the commencing of actual INTOURIST operations with the 370/158 computer serving as the real-time, or on-line, computer upon which the reservations are normally transacted. The 370/145 computer would be utilized as the off-line computer to produce the large number of ancillary reports and summaries including statistical and general management information required to make the system function effectively. It would simultaneously serve as the back up for the on-line function should the 370/158 fail.

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(C) When the work load on the real-time machine becomes sufficiently high that the 370/145 could not properly serve as the back up, or when the batch load for the 370/145 becomes too large for it to handle, IBM proposes to replace the 370/145 with a second 370/158. At that time the dual system would be transformed into two 370/158's, and the 370/145 then being surplus presumably would be moved out of the system.

(C) The peripherals specified include the 48 type-3330 disk drives already mentioned of which approximately 30 are for the primary data which is to be available on line, 10 for off-line inventories, 5 for systems residency and libraries and the remainder as spares. In addition, 8 type 3420-5 high-speed tape drives, each with an effective bit transfer rate of 1.6 Mb/sec, are to be supplied, along with two dual-access controllers. A pair of front-end communication processors, Model 3705-A1, are included for the interconnection of a large number of terminals through the system. The proposed terminals, numbering 187 in total, include 140 Model 4505 alpha-numeric display terminals for use by booking agents. In addition, a number of peripheral units for the handling of cards and printed output are associated with the system.

(C) The software to support the reservation system is designated IPARS. Additional batch processing procedures above and beyond those already included in IPARS are performed under the standard IBM batch operating system designated OS/VSI.

Diversion Potential

(C) The risk that a computer system may be diverted to an unauthorized use is present to the extent that the system has a significant amount of excess capacity available and contains the means, either through hardware or software, for tapping that capacity surreptitiously. With this in mind, the proposed IBM system as a whole as well as each of its major elements has been examined.

(C) The first fact that needs to be noted is that this is a very large system which far exceeds the limits set by COCOM for approval on other than exceptional grounds. For example, the processing data rate (PDR) of the 370/145 is 14.8 and the PDR of each of the two

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370/158's is 43. (The COCOM normal limit is set at a PDR of 32.) Thus, except for the initial learning phase when only the 370/145 is in place, the total installed computing power is quite large. For this reason, the diversion of a relatively small portion of this system to unauthorized purposes would be of much greater significance than would be the case were it smaller.

(C) While the significance of any diversion tends to be a function of size, it is the configuration and design of the system which tends to govern the extent to which the potential for diversion is present. In the INTOURIST system, the potential varies depending on whether on-line or off-line operations are being considered.

On-Line Operations

(C) The nature of the traffic which must be handled on-line is such that in order to accommodate appropriate high volume activity during the course of a normal working day with reasonable responsiveness, the amount of computing power provided by a 370/158 tends to far exceed the actual average needs. For somewhat different reasons, which will be dealt with later, there is also considerable excess information storage capacity in the 30 type-3330 disc drives assigned to on-line operations. These features, when coupled with the fact the IPARS system under which the on-line operations are carried out can be easily modified or augmented to utilize this excess capacity for additional tasks, gives rise to a system in which there is a possibility of substantial diversion.

Off-Line Operations

(C) In total computing power and in its dual CPU configuration (which is a requirement for any installation which must be operable at all times) this system is similar to that recently approved for AEROFLOT. However, a significant difference is that the INTOURIST system can be separated into two viable computers, each able to perform substantial computing functions. Thus, in this case, it is imagineable that during the course of a day, the standby off-line computer could be put to a clandestine use with very little chance of detection, if one considers only external observation. Moreover, since both central processors

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are interchangeable the 370/145 could be switched to the on-line reservation function, and the 370/158 utilized on off-line batch work at least 50% of the time. In addition, a minimum of 16 type-3330 disc drives are available to the off-line CPU, which means that the 370/158 when diverted to off-line operations would be able to perform very substantial scientific or information retrieval tasks.

Use by KGB

(C) Ordinarily the question of diversion arises in connection with the use of a computer for military purposes. The INTOURIST proposal embodies an additional basis for concern, namely, the extent to which this system will enable Soviet authorities, including the KGB, to more fully automate their control over foreign visitors throughout the Soviet Union as well as over their own citizens traveling both at home and abroad. Although INTOURIST is not a KGB controlled instrumentality, there are close links and well-established working relationships between the two organizations. Several Deputy Directors and a number of INTOURIST representatives abroad have been identified as KGB officers or agents over the years.

(C) The KGB is responsible for combating intelligence activity by tourists and for the recruitment of tourists as agents. It also runs an extensive network of agents and informants among INTOURIST interpreter-guides and other employees of this organization. Not all INTOURIST interpreter-guides are recruited KGB agents or informants, but all must submit daily reports on the tourists under their care as part of their job. These reports are passed to KGB officers who relay them to appropriate KGB elements which decide what operational activity will be undertaken. When necessary, instructions are passed back to the interpreter-guides through these officers.

(C) Requests for tourist visas for foreigners, whether submitted through local travel agencies or INTOURIST offices abroad, are all forwarded to INTOURIST Headquarters in Moscow, which, in turn, forwards them to KGB where they are reviewed for operational leads. Since 1961, the KGB has received a daily machine listing of all tourists who entered the USSR the previous day. These listings, as of 1964, contained the name, date and place of birth, and planned length of stay

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for each tourist. There was also a much shorter list identifying Americans who had made previous trips to the USSR, setting forth the number of trips made, dates, and the names of KGB officers who had worked on these cases.

(C) It can be assumed that this proposed INTOURIST computer system when working at its designed performance level will enhance KGB surveillance capabilities. Its huge memory, instant recall, and ease of access through its remote terminals will provide an instrument of unparalleled usefulness for their purposes.

Safeguards Against Diversion

(C) After identifying the several ways this system could be diverted, the task force attempted to devise means to eliminate or reduce to acceptable levels the risk of use of this equipment for other than its stated purpose. We began by considering the central processing units.

The Central Processor (CPU's)

(C) One of the attributes of a CPU which enables it to do advanced scientific and mathematical computations, such as are required in weapons design calculations, is floating point capability. The task force, therefore, examined the possibility of completely disabling or degrading this capability in the INTOURIST CPU's, as well as a number of other ways of limiting their mathematical computation capabilities. In each case, however, the engineering changes which would be required turned out to be either prohibitively costly to the vendor or easily reversible by the Soviets. (Details are given in the Appendix to this report.)

(C) The task force concluded that there are no safeguards to be found in feasible modifications of the CPU hardware.

Disk Drives

(C) To meet the requirements specified by the Soviet customer, the IBM proposal has allocated a very large amount of disk space for the

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data base files. As a consequence, the total of 48 type 3330 disk drives they propose to furnish is a very large number -- much larger than any system heretofore supplied to the Soviet Union by a Western manufacturer.

(C) The concern with the type 3330 disk drive begins with the fact that it is a high-performance device embodying advanced technology and ideally suited to large data base oriented systems with military applications. It is also two generations better than anything the Soviets are known to be producing. Moreover, since it is easily transported, physical diversion to another computer system is relatively simple. One safeguard against such a possibility is frequent inventory of the drives at the computer site. A more effective one is to insure from the outset that no drives are being supplied in excess of the legitimate needs of the computer system.

(C) Given the large amount of data which the Soviets have specified is to be manipulated, the file space is not inordinately large if the classical IBM mechanisms for solving such problems are taken into account. Although the overall storage algorithms and procedures could be more efficient, IBM has organized a procedure which appears to work for most of its current customers even though it is not the most efficient system imaginable. Assuming the need for maintaining all these files, the task force finds that a requirement for 48 type 3330 disk might be established.

(C) Nevertheless, from a program standpoint, not all these files appear to be necessary. Duplication of some for speed of retrieval clearly could be dispensed with, at least initially. Other files can be contracted and possibly eliminated. By so doing it appears possible to reduce the number of required disk drives by something like 30% without in any substantive way affecting the performance of the system, at least in the initial stages. It may even be possible initially to reduce the number by as much as 50% but it is unlikely that reductions could be made much beyond that point without redesigning the whole IPARS system.

(C) The task force considered the question of substituting a lower performance disk, such as the 2314, for the 3330 but judged that it would not be a viable alternative. The 2314 disks are not a current

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IBM production item and although it is probably possible to find such disks, it certainly would not be normal IBM business procedure to find and supply them. In addition, there are some technical problems which would have to be dealt with if 2314 disks were used. Furthermore, even if the substitution were made, the total amount of storage supplied will not change materially and if this system is going to be allowed at all, it appears appropriate to allow it to go with 3330's.

Other Equipment

(C) Although most of the other peripherals associated with this acquisition are quite modern by themselves, none of them gives rise to worrisome diversion questions provided some standard safeguards are employed. The only remaining question would be the fate of the 370/145 when and if the second 370/158 is delivered. Of course, the 370/145 with a PDR of 14.8 is not an enormous addition to the Soviet computing capability, but it would be appropriate to make sure that it not be transferred to some unknown or unapproved end-use or end-user.

Software

(C) In the software area IBM will be transferring their most recent general purpose batch operating system OS/VSI and also their highly specialized and effective, but not highly sophisticated, IPARS reservation system. The on-line reservation computer will normally have the IPARS system resident in it. With that system there is no way in which an agent's console could be used to enter batch jobs into this computer or for that matter into the off-line computer. In that sense, the on-line computer is safe. However, as pointed out earlier, the IPARS system itself can be modified to enable the on-line computer to do additional significant information processing tasks. The off-line computer on the other hand will normally be operating under OS/VSI, a general purpose batch processing system. As configured presently, remote batch processing is not possible. Nevertheless, the computers can be used for batch jobs by terminals located within the computing room. The batch processing could, of course, be bona fide INTOURIST activities. On the other hand, a mix of other jobs could certainly flow

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through the system if the Soviets are so inclined. However, it is possible to place systems management accounting programs to monitor the activity in the off-line, and to a lesser degree in the on-line systems. The Soviets appear to be amenable to this and with such systems management accounting programs, along with the kind of safeguards reporting devised for the AEROFLOT system, it should be possible to monitor the operation in such a way that any substantial diversion of off-line computing time would stand some chance of being detected. A more secure system of safeguards is possible. It would, however, be more elaborate and, among other things, would involve continuing U.S. Government costs for processing data obtained for monitoring purposes from the daily operations of this installation. However, diversion of the on-line system to other purposes such as those of the KGB probably could not be detected by any system of procedures.

Technology Transfer

(C) In the technology transfer area the whole system is a very large one and represents current state of the art computing technology in the United States. Although in one form or another the Soviets have seen and also have all of the technology represented here and although it represents the same level as the KAMA and AEROFLOT cases previously approved, this will give rise to one of the largest concentrations of such equipment in one location. It is, therefore, inevitable that some amount of technology will be transferred simply by the delivery of this system.

(C) While the furnishing of the IPARS system to the Soviets does represent a transfer of modern technology, the ideas are not new. The implementation is useful but not so significant as to make its transfer a matter of major concern. The off-line monitor OS is a more sophisticated general operating system, but the Soviets have earlier versions of this operation system and, in that sense, this will not be new material for them. Nevertheless, the transfer of information might be minimized here by suppressing the source code.

(C) The primary transfer of technology will be in the education and training of the Soviet technicians and engineers who operate and maintain the system. Although there are already competent computer

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technicians in the Soviet Union, this acquisition like any other single large sophisticated installation will give rise to yet another group of highly trained individuals in areas of sophisticated computer technology. Under these circumstances, controlling the transfer of this kind of technology translates into a need to limit the number of people trained by the contractor and the amount and kind of contractor provided training to the minimum necessary to make the installation viable.

Reliance on Safeguards

(C) In the past few years the idea has gained acceptance that the export of militarily significant computers to Communist countries can be approved as long as appropriate "safeguards" against diversion are imposed. Depending on the size and nature of the installation, these safeguards may include residence of the vendor's engineers on the site for a specific period of time, accounting for and reporting on the use and operation of the computer system, and a number of other procedures designed to detect and thus deter physical removal or diversion of the equipment from its stated purposes. However, what tends to be overlooked is the fact that safeguards provide no guarantee against diversion; they only reduce its likelihood to what in a given instance is regarded as an acceptable level. This means that the more installations there are in which reliance is placed upon safeguards the greater the probability that significant diversions will take place undetected.

(C) The task force points this out simply as a reminder that, quite apart from the acceptability of safeguards in a given case such as the INTOURIST proposal, it is a matter of some importance to hold installations requiring the application of safeguards to the minimum number and size possible.

Enclosures


Maurice J. Mountain
Chairman, Interagency Task
Force on Computer Safeguards

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APPENDIX

Modification of INTOURIST Central Processor Units (CPU's)

(C) One of the attributes of a CPU which enables it to do advanced scientific and mathematical computations, such as are required in weapons design calculations, is floating point capability. The task force, therefore, examined the possibility of completely disabling this capability in the INTOURIST CPU's. Such a procedure could almost completely eliminate the use of this system for any significant scientific or mathematically oriented computations. At the same time, it would not at all hamper the on-line functions of the reservation system, which have no use for floating point operations. However, it would remove the ability to do some marginally useful but nevertheless legitimate off-line batch operations. The cost of making this modification has been estimated by IBM as about \$50,000. While this is not a prohibitive amount, and may in any event be somewhat high, one difficulty with this solution is that it would make the central processing units at this installation into one-of-a-kind machines.

(C) The significance of this is that it is normal practice in the computer industry for the manufacturer to supply free of charge to each customer any updates or modifications subsequently developed for his machine throughout its life. Since one of the characteristics of the IBM 370 series is floating point capability, the software designers and engineers spread through the IBM organization take this feature for granted when they develop modifications. Moreover, such modifications are distributed automatically to all 370 series owners. With their floating point capability removed, either the INTOURIST machines could not benefit from such changes (which would mean that the Soviets would have to accept computers whose operational efficiency would be essentially frozen as of the date of their delivery), or IBM would have to set up a special group to rework for the INTOURIST installation modifications which all other 370 series machines would accept. Since IBM would regard such a special arrangement on updates for one installation as too costly, the question turns on whether the Soviets would accept a system on which the vendor's customary update support would not be provided.

(C) A more telling reason against following this course is that the floating point operations are actually implemented with a micro-program control store. This micro-program control store is

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loaded from a small master disc furnished with every CPU in this series (and thus easily obtainable by the Soviets from some other installation if they had to) and selected by a simple hard-wire connection at the time the system is installed. Put another way, the system comes with all its options present. Only those options the customer chooses are activated by the installation engineer, but all of them remain present in the system and can be activated by reloading the micro-program store which is made possible by a slight change in the wiring. What this means is that even if the floating point operations were disabled, it would be a fairly simple thing for the Soviets to restore them.

(C) Another alternative considered by the task force was the possibility of degrading without totally removing the floating point capability. Here the thought was that by reducing the processing data rate (PDR) of the 370/158 to at least the level of the 370/145 the updating difficulty would be overcome and even though the scientific usefulness of the CPU was not removed, it would be reduced to a tolerable level. The snag encountered here was the judgment on the part of IBM that while it would be possible to do this by removing the accelerator board and one half of the registers the cost of reworking the software to enable the machine to function without them was estimated by IBM to be about \$3,000,000.

(C) A number of other possibilities of limiting the mathematical computation capabilities of the CPU's were considered and explored with IBM experts, including changing the micro-program store to a "read-only" type, but in each case the engineering changes which would be required turned out to be prohibitively costly. With regard to the information retrieval operations for which the on-line system is designed, no way was found to reduce the excess capacity through changes to the CPU's. The task force concluded that there are no safeguards to be found in feasible modifications of the CPU hardware.

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ANNEX I

Computer System Safeguards for the Intourist Reservation System

- A - A responsible representative of Intourist will furnish to IBM a signed statement describing the end use and certifying that:
- (1) The equipment will only be used for civil applications;
 - (2) The equipment will not be re-exported or otherwise disposed of without permission of the U. S. Government;
 - (3) IBM will be notified of any significant change in application or other facts on which the license was based;
 - (4) Responsible Western representatives of IBM will have the right of free access at all times to the computer facility and all associated equipment wherever located;
 - (5) IBM representatives will be resident at Intourist for a period of at least three years after installation and acceptance of the IBM 370/158 and until the computer system is dedicated at least 75% of the time to the functions of Intourist.
 - (6) IBM representatives will be furnished information as required demonstrating continued Intourist application of the equipment including access to all programming documentation pertaining to programs being run on the computer and information on the operation of the computer system;
 - (7) The computer system will be run under IBM's supplied operating system which will provide standard accounting information and will not be modified nor a different operating system used without IBM authorization;
 - (8) IBM representatives will be permitted to monitor and control the utilization of spares and return to IBM all replaced major assemblies;
 - (9) The information required by Section B, below, will be reported monthly to the U. S. Government;

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- (10) IBM representatives will be permitted to report to the U.S. Government the other information required below.

B - Until such time as the computer system is dedicated at least 75% to the integrated operational functions of INTOURIST, a representative of INTOURIST will prepare and submit monthly to the U.S. Embassy in Moscow a report, countersigned by a responsible IBM representative, covering for each CPU separately where appropriate the computer time utilization, including:

- (1) Total clock time for the period of the report;
- (2) Total computer on time;
- (3) The total computer on time that IBM personnel were at the computer facility;
- (4) Computer on time devoted to hardware and software maintenance with IBM personnel involvement;
- (5) Other time devoted to maintenance;
- (6) Computer on time devoted to software development or system integration used by IBM personnel or with IBM personnel involvement;
- (7) Other time devoted to development or integration;
- (8) Computer on time devoted to scheduled INTOURIST use with IBM personnel involvement;
- (9) Other time devoted to scheduled INTOURIST use;
- (10) Idle computer on time;
- (11) Computer off time devoted to hardware maintenance under IBM supervision;
- (12) Other off time devoted to hardware maintenance;
- (13) Other off time.

- C - IBM will insure that equipment deliveries will be made incrementally consistent with system implementation needs. A responsible IBM representative on site will certify by signing the report called for in B, above, that he was present at the time of its generation, that it is based on computer-generated accounting information, was processed by the IBM provided program and generated as a result of that process.
- D - If the monthly report called for in B, above, indicates that for either CPU more than 25% of the total computer on time IBM personnel were not at the computer facility, IBM will report whether the computer was either idle or was used for approved purposes. In the event that more than 25% of the total computer on time is, in the judgment of the U.S. Government inadequately accounted for, a representative of Intourist will provide IBM with information as agreed in A (6) above along with approval for its transmittal to the U.S. Government. In addition, the U.S. Government may request IBM to monitor the operation of the computers more closely, and/or exercise its right of access more frequently at times its personnel are not normally at the computer facility and report its findings.
- E - IBM representatives will be resident at the Intourist installation for a period of at least three years after installation and acceptance of the IBM 370/158 and until the computer system is dedicated at least 75% of the time to the functions of Intourist. During this period, IBM's Western representative will prepare and submit monthly to the U.S. Government a report covering:
- (1) The status of training of Soviet personnel;
 - (2) The status of development of the major application programs for the computer systems;
 - (3) The total clock time that IBM personnel were at the site;
 - (4) Any change in disposition of the exported computer equipment or accountability of spare parts;

- (5) Any significant change in facts on which approval of this case was based and whether in their judgment the computers continue to be used for approved purposes at the authorized location.
- F - After the time that IBM has demonstrated that the computer system is dedicated at least 75% of the time to the functions of Intourist, IBM's Western representative will make monthly visits and submit monthly to the U.S. Government a report covering items E (1), (3), (4) and (5) above and whether the computer system continues to be dedicated at least 75% of the time to the approved use.
- G - IBM will limit the quantity of spares on-site, after the one-year warranty period, to that necessary for supporting the computer for a maximum of four months.
- H - In the event that any of these provisions is contravened or the U.S. Government has reasonable ground for suspicion that significant diversion to strategic purposes has taken place and no satisfactory explanation is forthcoming, the U.S. Government will take appropriate action which may include requiring IBM to remove all personnel from the facility and to stop all support (provision of equipment or spares from the West or from depots or similar computer facilities in the Soviet Bloc, training, maintenance, software, etc.) of the facility.

ANNEX II

Measures to Limit Technology Transfers for the Intourist Reservation System

IBM will limit the transfer of technology to the minimum level for the installation, operation and maintenance of the computer system.

- A - Maintenance engineers will be limited to the training and information necessary to maintain the equipment provided.
- B - Analysts and application programmers will be limited in number and to the training and information necessary to develop the application programs not the responsibility of IBM.
- C - The total number of system programmers will be limited to six and their training and information will be limited to that necessary to maintain the operating systems and support software to be provided. The training of the system programmers will be delayed until the appropriate time prior to the computer system being 75% dedicated to the integrated functions of Intourist.
- D - IBM will limit the provision of the operating system and their standard library programs to those necessary and appropriate to the Intourist applications.

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EXECUTIVE SECRETARIAT

Routing Slip

TO:		ACTION	INFO	DATE	INITIAL
1	DCI				
2	DDCI				
3	S/MC				
4	DDS&T		✓		
5	DDI				
6	DDA		✓		
7	DDO		✓		
8	D/DCI/IC				
9	D/DCI/NIO				
10	GC				
11	LC				
12	IG				
13	Compt				
14	D/Pers				
15	D/S				
16	DTR				
17	Asst/DC				
18	AO/DC				
19					
20					
21					
22					
SUSPENSE		Date			

Remarks:

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